

REQUEST FOR ADDITIONAL INFORMATION
PROPOSED AMENDMENT FOR POWER UPRATE
RIVER BEND STATION UNIT 1

Mechanical and Civil Engineering Branch

1. In reference to Section 2.5 of Attachment 2 to the amendment request (Reference 1), provide a summary of evaluation for the effect of the proposed power uprate on the structural integrity of the control rod drive mechanisms (CRDMs). Confirm whether and how the existing design basis stress and fatigue analysis of the CRDMs remains unchanged for the proposed 1.7 percent power uprate.
2. In reference to Section 3.2.2, confirm that the current design basis for the RBS power operation at 3039 MWt bounds the proposed power uprate at 3091 MWt. Provide a summary of the evaluation performed including maximum CUFs, calculated stresses, and code-allowable limits to show that sufficient margin exists in the current design basis for critical reactor vessel components to accommodate the increase in steam flow, feedwater flow and temperature due to the proposed power uprate. These components include the main closure flange and studs, reactor vessel support skirt, refueling bellows, stabilizer brackets, recirculation inlet and feedwater nozzles.
3. In reference to Section 3.3.3, you indicated that the generic evaluation in the TLTR (TPO Licensing Topical Report) is applicable to the proposed power uprate condition, and that no further evaluation is needed. However, the TLTR (Reference 2) has not been approved by the staff. Provide a summary of the evaluation for the steam dryers and separators and discuss how these components are affected by the proposed power uprate. Confirm whether and how the current design basis analysis of the separators and dryers remain valid for the proposed 1.7 percent power uprate condition.
4. In reference to Section 3.4, provide a summary describing the effect of the proposed power uprate on the safety-related thermowells and sample probes in the MS, FW, and recirculation piping systems. Confirm whether and how the existing flow induced vibration (FIV) analysis of the thermowells and sample probes remains valid for the proposed 1.7 percent power uprate.
5. In reference to Section 3.5.1, you state that "the effect of the TPO uprate with no nominal vessel dome pressure increase is negligible for the reactor coolant pressure boundary portion of all piping except for portions of the FW lines, MS lines, and piping connected to the FW and MS line. Identify piping systems attached to FW lines that are affected by the proposed power uprate and a summary of TPO evaluation for these piping systems.

Attachment

Attachment 1

6. In reference to Section 3.5.2, list the most critical balance-of-plant (BOP) piping systems that were evaluated for the power uprate. Provide a summary of the evaluation performed for BOP piping, components, and pipe supports, nozzles, penetrations, guides, valves, pumps, heat exchangers and pipe support anchorage.

REFERENCES

1. Entergy Operation, Inc. Letter RBG-45951 to the NRC, "River Bend Station, Unit 1, License Amendment Request (LAR) 2002-15, Appendix K Measurement Uncertainty Recovery - Power Uprate," dated May 14, 2002. Attachment 2: GE Licensing Topical Report, NEDC-33051P, "Safety Analysis Report for River Bend Station Thermal Power Optimization" May 2002 (proprietary)
2. GE Nuclear Energy, "Generic Guidelines and Evaluation for General Electric Boiling Water Reactor (BWR) Thermal Power Optimization," (TLTR), Licensing Topical Report NEDC-32938P, Class III (proprietary), July 2000